

CPP 程式設計題

命題者：LL

題目名稱(中文/英文)：Sample platform game

主要測試觀念：Class, String, Function, IO

Basics

- ☒ C++ BASICS
- ☒ FLOW OF CONTROL
- ☒ FUNCTION BASICS
- ☐ PARAMETERS AND OVERLOADING
- ☐ ARRAYS
- ☐ STRUCTURES AND CLASSES
- ☐ CONSTRUCTORS AND OTHER TOOLS
- ☐ OPERATOR OVERLOADING, FRIENDS, AND REFERENCES
- ☐ STRINGS
- ☐ POINTERS AND DYNAMIC ARRAYS

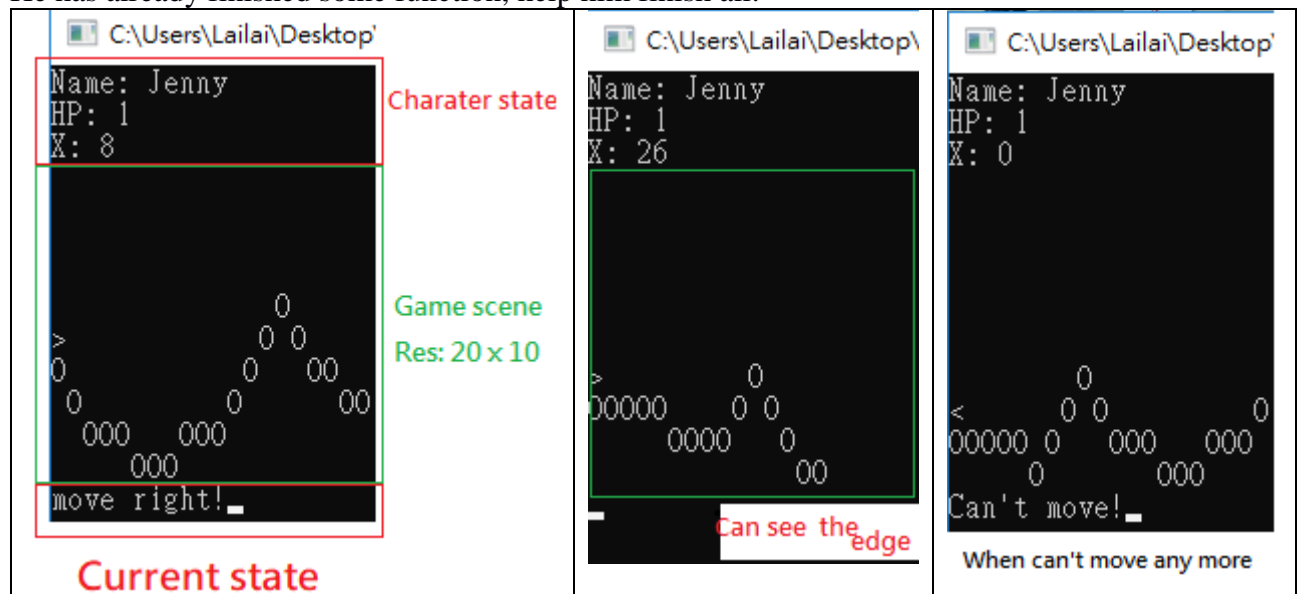
Functions

- ☐ SEPARATE COMPILATION AND NAMESPACES
- ☐ STREAMS AND FILE I/O
- ☐ RECURSION
- ☐ INHERITANCE
- ☐ POLYMORPHISM AND VIRTUAL FUNCTIONS
- ☐ TEMPLATES
- ☐ LINKED DATA STRUCTURES
- ☐ EXCEPTION HANDLING
- ☐ STANDARD TEMPLATE LIBRARY
- ☐ PATTERNS AND UML

題目說明：

Ming wants to make a simple platform game, and platform is loaded from file. Make character enable to move left and right on the platform.

He has already finished some function, help him finish all.



Terrain file :

Consists of multiple numbers.

Higher number means higher altitude.

Numbers between zero and five (include 0 and 5).

Each line in terrain file does not limit the number of digits. Read all line and combine all numbers together, draw the terrain by 'O'.

When the terrain is displayed, limit to 20 'O' (including 20 under the character).

Character :

Character can move left and right by using left and right key on keyboard. The symbol of character is '>' and '<'.

When pressing right key, the character will face right and use '>' as symbol.

When pressing left key, the character will face left and use '<' as symbol.

Character will always stand on ground and unable to move any further when at the edge of terrain.

UI :

The first row in the upper left corner shows character name (Name:). (Your student ID)

The second row in the upper left corner shows character HP (HP:). (Whatever u want)
The third row in the upper left corner shows coordinate x (X:).
Lower left shows character's current move state ("Move right!", "move left!", "Can't move!")

輸入說明：

Read Terrain.txt

輸出說明：

The first three lines are character's name, blood volume, coordinates

The next ten line shown terrain and character by using 'O' and '>' '<'.

character is always at on the far left. Terrain shows only 20 at most.

The last line flashed over the player's moving state, respectively: Move right!, move left!, Can't move!.

Players can move on the ground and will not walk beyond the border (including the left and right sides)

For more information, see sample.exe

IO 範例：

| Sample Input | Sample Output (whole version is in output.txt) |
|--------------|--|
| Terrain.txt | |

附屬資料：

☒ 解答程式：

☒ 測試資料：

☒ 易，僅需用到基礎程式設計語法與結構

☐ 中，需用到多項程式設計語法與結構

☐ 難，需用到多項程式結構或較為複雜之資料型態或結構

解題時間：10 分鐘

其他註記：